

Turner

PT-12

1644

1647

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: RECEIVED  
11.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

NOV 01 2000

ENTERED

1 <110> APPLICANT: Lee, Arthur M.E.  
2 Jain, Mukesh  
3 Watanabe, Masafumi  
4 <120> TITLE OF INVENTION: IN VITRO DIFFERENTIATION OF VASCULAR SMOOTH MUSCLE  
5 CELLS AND REAGENTS RELATED THERETO  
6 <130> FILE REFERENCE: APV-382.01  
7 <140> CURRENT APPLICATION NUMBER: US/09/181,311  
8 <141> CURRENT FILING DATE: 1998-10-28  
9 <150> EARLIER APPLICATION NUMBER: 60/063,363  
10 <151> EARLIER FILING DATE: 1997-10-28  
11 <150> EARLIER APPLICATION NUMBER: 60/080,420  
12 <151> EARLIER FILING DATE: 1998-04-02  
13 <150> EARLIER APPLICATION NUMBER: 60/096,685  
14 <151> EARLIER FILING DATE: 1998-08-14  
15 <160> NUMBER OF SEQ ID NOS: 23  
16 <170> SOFTWARE: PatentIn Ver. 2.0  
17 <210> SEQ ID NO 1  
18 <211> LENGTH: 153  
19 <212> TYPE: DNA  
20 <213> ORGANISM: Murine  
21 <220> FEATURE:  
22 <223> OTHER INFORMATION: Clone WO11  
23 <400> SEQUENCE: 1  
24 agtgggtgtat gtggggaagc cttctgtgaa aacgtggaag gatccttcct gtgtgtgtgt 60  
25 gccgatgaga accaggagta cagcccatg actgggcagt gtcgctctcg ggtcacggaa 120  
26 gattcaggtg tggatcgtca gcctaggcga aga 153  
27 <210> SEQ ID NO 2  
28 <211> LENGTH: 143  
29 <212> TYPE: DNA  
30 <213> ORGANISM: Rattus  
31 <220> FEATURE:  
32 <223> OTHER INFORMATION: Clone LTBP-1  
33 <400> SEQUENCE: 2  
34 agtgggtgtat gtggggaggc tttctgtgaa aatgtggaag ggtccttcct gtgcgtgtgt 60  
35 gccgatgaga accaggagta cagcccatg actgggcagt gtcgctcccg ggctactgaa 120  
36 gattcaggtg tggatcgtca gcc 143  
37 <210> SEQ ID NO 3  
38 <211> LENGTH: 1128  
39 <212> TYPE: PRT  
40 <213> ORGANISM: Homo sapiens  
41 <220> FEATURE:  
42 <223> OTHER INFORMATION: ACLP  
43 <400> SEQUENCE: 3  
44 Met Ala Ala Val Arg Gly Ala Pro Leu Leu Ser Cys Leu Leu Ala Leu

PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: I181311.RAW

45	1	5	10	15
46	Leu	Ala	Leu	Cys
47	20	25	30	
48	Glu	Ile	Glu	Glu
49	35	40	45	
50	Pro	Arg	Glu	Asp
51	50	55	60	
52	Arg	Val	Arg	Lys
53	65	70	75	80
54	Ala	Glu	Val	Pro
55	85	90	95	
56	Lys	Asp	Lys	Gly
57	100	105	110	
58	Arg	Pro	Pro	Lys
59	115	120	125	
60	Pro	Lys	Glu	Lys
61	130	135	140	
62	Pro	Lys	Ala	Thr
63	145	150	155	160
64	Pro	Ser	Gly	Lys
65	165	170	175	
66	Trp	Pro	Leu	Pro
67	180	185	190	
68	Glu	Gly	Gly	Ala
69	195	200	205	
70	Thr	His	Val	Glu
71	210	215	220	
72	Glu	Gln	Pro	Thr
73	225	230	235	240
74	Phe	Glu	Tyr	Ile
75	245	250	255	
76	Arg	Arg	Arg	Pro
77	260	265	270	
78	Pro	Ala	Pro	Ala
79	275	280	285	
80	Leu	Pro	Pro	Leu
81	290	295	300	
82	Tyr	Asp	Asp	Met
83	305	310	315	320
84	Glu	Arg	Gln	Thr
85	325	330	335	
86	Glu	Asp	Ser	Ser
87	340	345	350	
88	Gly	Lys	Asp	His
89	355	360	365	
90	Trp	Thr	Pro	Thr
91	370	375	380	
92	His	Arg	Ile	Asn
93	385	390	395	400
94	Gly	Ala	Gln	Arg

PAGE: 3

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: I181311.RAW

95		405		410		415		
96	Asp Tyr Tyr	Asp Gly Ala Trp Cys Ala	Glu Asp Asp Ala Arg Thr Gln					
97		420		425		430		
98	Trp Ile Glu Val	Asp Thr Arg Arg Thr Thr Arg Phe Thr Gly Val Ile						
99		435		440		445		
100	Thr Gln Gly Arg	Asp Ser Ser Ile His Asp Asp Phe Val Thr Thr Phe						
101		450		455		460		
102	Phe Phe Ser Asn	Asp Ser Gln Thr Trp Val Met Tyr Thr Asn Gly Tyr						
103		465		470		475		480
104	Glu Glu Met Thr	Phe His Gly Asn Val Asp Lys Asp Thr Pro Val Leu						
105		485		490		495		
106	Ser Glu Leu Pro	Glu Pro Val Val Ala Arg Phe Ile Arg Ile Tyr Pro						
107		500		505		510		
108	Leu Thr Trp Asn	Gly Ser Leu Cys Met Arg Leu Glu Val Leu Gly Cys						
109		515		520		525		
110	Ser Val Ala Pro	Val Tyr Ser Tyr Tyr Ala Gln Asn Glu Val Val Asp						
111		530		535		540		
112	Asp Leu Asp Phe	Arg His His Ser Tyr Lys Asp Met Arg Gln Leu Met						
113		545		550		555		560
114	Lys Val Val Asn	Glu Glu Cys Pro Thr Ile Thr Arg Thr Tyr Ser Leu						
115		565		570		575		
116	Gly Lys Ser Ser	Arg Gly Leu Lys Ile Tyr Ala Met Glu Ile Ser Asp						
117		580		585		590		
118	Asn Pro Gly Glu	His Glu Leu Gly Glu Pro Glu Phe Arg Tyr Thr Ala						
119		595		600		605		
120	Gly Ile His Gly	Asn Glu Val Leu Gly Arg Glu Leu Ile Leu Met Gln						
121		610		615		620		
122	Tyr Leu Cys Arg	Glu Tyr Arg Asp Gly Asn Pro Arg Val Arg Ser Leu						
123		625		630		635		640
124	Val Gln Asp Thr	Arg Ile His Leu Val Pro Ser Leu Asn Pro Asp Gly						
125		645		650		655		
126	Tyr Glu Val Ala	Ala Gln Met Gly Ser Glu Phe Gly Asn Trp Ala Leu						
127		660		665		670		
128	Gly Leu Trp Thr	Glu Glu Gly Phe Asp Ile Phe Glu Asp Phe Pro Asp						
129		675		680		685		
130	Leu Asn Ser Val	Leu Trp Gly Ala Glu Glu Phe Val Pro Tyr Arg Val						
131		690		695		700		
132	Pro Asn Asn Asn	Leu Pro Ile Pro Glu Arg Tyr Leu Ser Pro Asp Ala						
133		705		710		715		720
134	Thr Val Ser Thr	Glu Val Arg Ala Ile Ile Ala Trp Met Glu Lys Asn						
135		725		730		735		
136	Pro Phe Val Leu	Gly Ala Asn Leu Asn Gly Gly Glu Arg Leu Val Ser						
137		740		745		750		
138	Tyr Pro Tyr Asp	Met Ala Arg Thr Pro Thr Gln Glu Gln Leu Leu Ala						
139		755		760		765		
140	Ala Ala Met Ala	Ala Ala Glu Gly Glu Asp Glu Val Ser Glu Ala Gln						
141		770		775		780		
142	Glu Thr Pro Asp	His Ala Ile Phe Arg Trp Leu Ala Ile Ser Phe Ala						
143		785		790		795		800
144	Ser Ala His Leu	Thr Leu Thr Glu Pro Tyr Arg Gly Gly Cys Gln Ala						

PAGE: 4

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: I181311.RAW

```

145          805          810          815
146  Gln Asp Tyr Thr Gly Gly Met Gly Ile Val Asn Gly Ala Lys Trp Asn
147          820          825          830
148  Pro Arg Thr Gly Thr Ile Asn Asp Phe Ser Tyr Leu His Thr Asn Cys
149          835          840          845
150  Leu Glu Leu Ser Phe Tyr Ile Asp Lys Phe Pro His Glu Ser Glu Leu
151          850          855          860
152  Pro Arg Glu Trp Glu Asn Asn Lys Glu Ala Leu Leu Thr Phe Met Glu
153          865          870          875          880
154  Gln Val His Arg Gly Ile Lys Gly Val Val Thr Asp Glu Gln Gly Ile
155          885          890          895
156  Pro Ile Ala Asn Ala Thr Ile Ser Val Ser Gly Ile Asn His Gly Val
157          900          905          910
158  Lys Thr Ala Ser Gly Gly Asp Tyr Trp Arg Ile Leu Asn Pro Gly Glu
159          915          920          925
160  Tyr Arg Val Thr Ala Glu Gly Tyr Thr Pro Ser Ala Lys Thr Cys Asn
161          930          935          940
162  Val Asp Tyr Asp Ile Gly Ala Thr Gln Cys Asn Phe Ile Leu Ala Arg
163          945          950          955          960
164  Ser Asn Trp Lys Arg Ile Arg Glu Ile Met Ala Met Asn Gly Asn Arg
165          965          970          975
166  Pro Ile Pro His Ile Asp Pro Ser Arg Pro Met Thr Pro Gln Gln Arg
167          980          985          990
168  Arg Leu Gln Gln Arg Arg Leu Gln His Arg Leu Arg Leu Arg Ala Gln
169          995          1000          1005
170  Met Arg Leu Asn Ala Thr Thr Thr Leu Gly Pro His Thr Val Pro Pro
171          1010          1015          1020
172  Thr Leu Pro Pro Ala Pro Ala Thr Thr Leu Ser Thr Thr Ile Glu Pro
173          1025          1030          1035          1040
174  Trp Gly Leu Ile Pro Pro Thr Thr Ala Gly Trp Glu Glu Ser Glu Thr
175          1045          1050          1055
176  Glu Thr Tyr Thr Glu Val Val Thr Glu Phe Gly Thr Glu Val Glu Pro
177          1060          1065          1070
178  Glu Phe Gly Thr Lys Val Glu Pro Glu Phe Glu Thr Gln Leu Phe Glu
179          1075          1080          1085
180  Thr Gln Leu Glu Pro Glu Phe Glu Glu Glu Glu Glu Glu Lys Glu
181          1090          1095          1100
182  Glu Glu Ile Ala Thr Gly Gln Ala Phe Pro Phe Thr Thr Val Glu Thr
183          1105          1110          1115          1120
184  Tyr Thr Val Asn Phe Gly Asp Phe
185          1125
186  <210> SEQ ID NO 4
187  <211> LENGTH: 1102
188  <212> TYPE: PRT
189  <213> ORGANISM: Murine
190  <220> FEATURE:
191  <223> OTHER INFORMATION: ACLP
192  <400> SEQUENCE: 4
193  Met Ala Pro Val Arg Thr Ala Ser Leu Leu Cys Gly Leu Leu Ala Leu
194          1          5          10          15

```

PAGE: 5

# RAW SEQUENCE LISTING PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: I181311.RAW

195	Leu Thr Leu Cys Pro Glu Gly Asn Pro Gln Thr Val Leu Thr Asp Asp	20	25	30
196				
197	Glu Ile Glu Glu Phe Leu Glu Gly Phe Leu Ser Glu Leu Glu Thr Gln	35	40	45
198				
199	Ser Pro Pro Arg Glu Asp Asp Val Glu Val Gln Pro Leu Pro Glu Pro	50	55	60
200				
201	Thr Gln Arg Pro Arg Lys Ser Lys Ala Gly Gly Lys Gln Arg Ala Asp	65	70	75
202				
203	Val Glu Val Pro Pro Glu Lys Asn Lys Asp Lys Glu Lys Lys Gly Lys	85	90	95
204				
205	Lys Asp Lys Gly Pro Lys Ala Thr Lys Pro Leu Glu Gly Ser Thr Arg	100	105	110
206				
207	Pro Thr Lys Lys Pro Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys Pro	115	120	125
208				
209	Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys Pro Lys Glu Lys Pro Pro	130	135	140
210				
211	Lys Ala Thr Lys Lys Pro Lys Glu Lys Lys Ala Thr Lys Arg Pro Ser	145	150	155
212				
213	Ala Gly Lys Lys Phe Ser Thr Val Ala Pro Leu Glu Thr Leu Asp Arg	165	170	175
214				
215	Leu Leu Pro Ser Pro Ser Asn Pro Ser Ala Gln Glu Leu Pro Gln Lys	180	185	190
216				
217	Arg Asp Thr Pro Phe Pro Asn Ala Trp Gln Gly Gln Gly Glu Glu Thr	195	200	205
218				
219	Gln Val Glu Ala Lys Gln Pro Arg Pro Glu Pro Glu Glu Glu Thr Glu	210	215	220
220				
221	Met Pro Thr Leu Asp Tyr Asn Ile Glu Lys Glu Asp Tyr Glu Asp Phe	225	230	235
222				
223	Glu Tyr Ile Arg Arg Gln Lys Gln Pro Arg Pro Thr Pro Ser Arg Arg	245	250	255
224				
225	Arg Leu Trp Pro Glu Arg Pro Glu Glu Lys Thr Glu Glu Pro Glu Glu	260	265	270
226				
227	Arg Lys Glu Val Glu Pro Pro Leu Lys Pro Leu Leu Pro Pro Asp Tyr	275	280	285
228				
229	Gly Asp Ser Tyr Val Ile Pro Asn Tyr Asp Asp Leu Asp Tyr Pro His	290	295	300
230				
231	Pro Pro Pro Gln Lys Pro Asp Val Gly Gln Glu Val Asp Glu Glu Lys	305	310	315
232				
233	Glu Glu Met Lys Lys Pro Lys Lys Glu Gly Ser Ser Pro Lys Glu Asp	325	330	335
234				
235	Thr Glu Asp Lys Trp Thr Val Glu Lys Asn Lys Asp His Lys Gly Pro	340	345	350
236				
237	Arg Lys Gly Glu Glu Leu Glu Glu Glu Trp Ala Pro Val Glu Lys Ile	355	360	365
238				
239	Lys Cys Pro Pro Ile Gly Met Glu Ser His Arg Ile Asn Gln Ile Arg	370	375	380
240				
241	Ala Ser Ser Met Leu Arg His Gly Leu Gly Ala Gln Arg Gly Arg Leu	385	390	395
242				
243	Asn Met Gln Ala Gly Ala Asn Glu Asp Asp Tyr Tyr Asp Gly Ala Trp	405	410	415
244				

PAGE: 6

**VERIFICATION SUMMARY**  
**PATENT APPLICATION US/09/181,311**

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: I181311.RAW

Line ? Error/Warning

Original Text

-----